

REMARKS

Claims 1-2 and 4-12 are pending in this application.

The Office Action objects to the specification because it is asserted that it is not clear how the clearance described on page 11 of the specification is formed between the outer peripheral surface of the ring assemblies. The Office Action also rejects claims 1-2 and 4-12 under 35 U.S.C. 112, first paragraph, as containing subject matter not sufficiently described in the specification. In particular, the Office Action asserts that it is not clear how the clearance is obtained. Applicants traverse this objection and rejection.

Referring to Fig. 3 of the present specification, a clearance is formed between the metal rings 33 and the retainers 44. A clearance is also formed between the retainers 44 and the lower faces 38U of the radially inner edges of the ring slots 35. The clearances are formed by making the length of the innermost retainer 45 longer than the outermost ring 33 and by making the outermost retainer 45 shorter than the length of the inner circumference of the lower face 38U.

At certain points during the travel of the rings and retainers, the rings and retainers will be pressed together against both the lower faces 38U and the saddle faces 38L, thus supporting the spaced positioning of the rings and retainers at other points of travel. This is shown in Fig. 4. As explained in the present specification,

“in the vicinity of an exit of the driven pulley 11 of the metal belt type continuously variable transmission T, the metal elements 32 are inclined in such a manner that they are fallen forwards. In this case, in the conventional metal belt 15 having no retainers 44, 44, there is a possibility that rear ends a of the saddle faces 38L, 38L of the ring slots 35, 35 in the metal element 32 and front ends b of the lower faces 38U, 38U of the ear as viewed in the travel direction strongly abut against the inner and outer peripheral surfaces of the

metal ring assemblies 31, 31, respectively, as shown in Fig.8, and the metal rings 33 are worn by a stress σH generated at such abutment portions (see Fig.8). In the present embodiment, however, the outer peripheral surfaces of the metal ring assemblies 31, 31 are put into contact with the front ends b of the lower faces 38U, 38U of the ear via the retainers 44, 44, as shown in Fig.4, and the retainers 44, 44 can be resiliently deformed to absorb a shock (see Fig.4), because the clearances α and β exist radially inside and outside the retainers 44, 44.

As described above, when the shock acting on the front ends b of the lower faces 38U, 38U of the ear as viewed in the travel direction by the resilient deformation of the retainers 44, 44 has been buffered, a shock acting on a reaction to the rear ends a of the saddle faces 38L, 38L as viewed in the travel direction is also buffered. Thus, the wear of the metal belt 15 can be prevented by a simple structure in which the two retainers 44, 44 are only added without subjecting the metal elements 32 to a special processing.

If there is a rolling of the metal element 32 generated when the metal element 32 is meshed with the drive pulley 6, the following problem is encountered: The pulley-abutment faces 39, 39 of the metal element 32 cannot be smoothly engaged with the V-faces of the drive pulley 6, thereby generating an abnormal wear and/or noise. However, the rolling of the metal element 32 is inhibited by the shock absorbing effect provided by mounting the retainers 44, 44 (see Fig.6A), because the clearances between the retainers 44, 44 and the lower faces 38U, 38U of the ear can be set smaller than those in the prior art (see Fig.6B). Thus, the metal element 32 can be smoothly meshed with the drive pulley 6, thereby inhibiting the generation of the abnormal wear and noise, to enhance the durability of the metal element 32 and the drive pulley 6. The flexural rigidity of the retainers 44, 44 is set lower than that of the metal ring assemblies 31, 31 so that there is no influence on the efficiency.

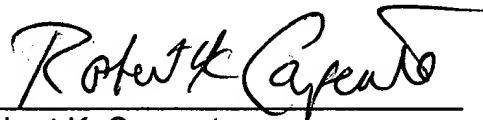
In particular, Applicants respectfully submit that one of skill in the art would understand that the endless resilient member will inherently have some rigidity. Thus, with the inner most peripheral surface of the endless resilient member being larger than the outer most peripheral surface of the belts, and with the support provided at the points illustrated in Fig. 4, a clearance will be formed between the resilient member and the belts.

Thus, it is respectfully submitted that one of skill in the art would readily understand what is meant by the clearance described on page 11 of the present specification. Reconsideration and withdrawal of the objection to the specification and rejection of claims 3-10 and 12 under 35 U.S.C. 112, first paragraph, are thus respectfully requested.

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300, making reference to Attorney Docket No. 107348-00137.

Respectfully submitted,

A handwritten signature in black ink, reading "Robert K. Carpenter", written over a horizontal line.

Robert K. Carpenter
Registration No. 34,794

Customer 004372
ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
1050 Connecticut Avenue, N.W., Suite 400
Washington, D.C. 20036-5339
Tel: (202) 857-6000
Fax: (202) 638-4810